Patent Claims

1. Sensor unit for vehicles, particularly motor vehicles, **characterized** by a first housing (1) for the accommodation of at least one converter element,
a second housing (2) for the accommodation of a signal processing unit,
an at least 4-pole connection (3) between the first and the second housing, and
a port (4,5) of the second housing for a control device.

2. Sensor unit according to claim 1, **characterized** in that the port is designed as a 2-wire-connection, with a pin (4) as signal output and a pin (5) for the supply of operating voltage.

3. Sensor unit according to claim 1 or 2, **characterized** in that the converter element is designed as a magneto-electric converter, preferably as a magnetoresistive bridge (9).

4. Sensor unit according to any one of claims 1 to 3, **characterized** in that the first housing (1) comprises functional elements for positioning or carrying at least one magnet (6,7,8) used for pre-loading the magneto-electric converter elements.

5. Sensor unit according to any one of claims 1 to 4, **characterized** in that the signal processing unit arranged in housing (2) is designed as an analog amplifier with a current output via pin (4) and provides an alternating current with an approximately sinusoidal course.

6. Sensor for vehicles, **characterized** by a design according to one of the claims 1 to 5.

7. Sensor according to claim 6, **characterized** by a design as a wheel speed sensor.

8. Sensor according to claim 6, **characterized** by a design as a tire force sensor.

9. Sensor according to claim 6 or 8, **characterized** by a housing (1), in which a magnetoresistive bridge (9) is arranged, a housing (2), in which an analog amplifier is arranged having a current output that provides an alternating current with an approximately sinusoidal course, an at least 4-pole connection (3) between first and second housings, and a port with a pin (4) and a pin (5), which establishes the current output.

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